

Gerard J. Milburn

List of Publications by Year in descending order

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142
papers

17,772
citations

34016

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12558

132
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145
all docs

145
docs citations

145
times ranked

8489
citing authors

#	ARTICLE	IF	CITATIONS
1	Designing a physical quantum agent. <i>Physical Review A</i> , 2021, 103, .	1.0	5
2	The thermodynamics of clocks. <i>Contemporary Physics</i> , 2020, 61, 69-95.	0.8	19
3	Integrated quantum photonic sensor based on Hong-Ou-Mandel interference. <i>Optics Express</i> , 2015, 23, 16008.	1.7	14
4	Heuristic for estimation of multiqubit genuine multipartite entanglement. <i>International Journal of Quantum Information</i> , 2015, 13, 1550023.	0.6	2
5	Breakdown of the Cross-Kerr Scheme for Photon Counting. <i>Physical Review Letters</i> , 2013, 110, 053601.	2.9	43
6	Demonstrating Uncertainty. <i>Science</i> , 2013, 339, 770-771.	6.0	1
7	The 20th anniversary of quantum state engineering. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 100201.	0.6	9
8	Decoherence and the conditions for the classical control of quantum systems. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2012, 370, 4469-4486.	1.6	10
9	Reversible Optical-to-Microwave Quantum Interface. <i>Physical Review Letters</i> , 2012, 109, 130503.	2.9	222
10	Quantum Interface between an Electrical Circuit and a Single Atom. <i>Physical Review Letters</i> , 2012, 108, 130504.	2.9	30
11	Multiscale photosynthetic and biomimetic excitation energy transfer. <i>Nature Physics</i> , 2012, 8, 562-567.	6.5	35
12	Pulsed quantum optomechanics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 16182-16187.	3.3	231
13	Efficient quantum computing using coherent photon conversion. <i>Nature</i> , 2011, 478, 360-363.	13.7	122
14	Intracavity weak nonlinear phase shifts with single photon driving. <i>Optics Communications</i> , 2010, 283, 741-746.	1.0	9
15	Quantum Measurement and Control of Single Spins in Diamond. <i>Science</i> , 2010, 330, 1188-1189.	6.0	14
16	Linear amplification and quantum cloning for non-Gaussian continuous variables. <i>New Journal of Physics</i> , 2010, 12, 103010.	1.2	22
17	Giant Kerr Nonlinearities in Circuit Quantum Electrodynamics. <i>Physical Review Letters</i> , 2009, 103, 150503.	2.9	88
18	Parametric self pulsing in a quantum optomechanical system. <i>Fortschritte Der Physik</i> , 2009, 57, 1052-1063.	1.5	13

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19	Avalanche inspiration. Nature Photonics, 2008, 2, 392-393.	15.6	0
20	Quantum nanoscience. Contemporary Physics, 2008, 49, 413-433.	0.8	14
21	Nonlinear quantum metrology using coupled nanomechanical resonators. New Journal of Physics, 2008, 10, 125018.	1.2	72
22	Quantum noise in a nanomechanical Duffing resonator. New Journal of Physics, 2008, 10, 105020.	1.2	20
23	Beyond the Coherent Coupled Channels Description of Nuclear Fusion. Physical Review Letters, 2007, 99, 192701.	2.9	170
24	Entangling a nanomechanical resonator with a microwave field. Journal of Modern Optics, 2007, 54, 2223-2235.	0.6	7
25	Linear optical quantum computing with photonic qubits. Reviews of Modern Physics, 2007, 79, 135-174.	16.4	2,076
26	Effective Generation of Cat and Kitten States. Open Systems and Information Dynamics, 2007, 14, 81-90.	0.5	6
27	Quantum computation by communication. New Journal of Physics, 2006, 8, 30-30.	1.2	188
28	The quantum Mellin transform. New Journal of Physics, 2006, 8, 328-328.	1.2	38
29	Lorentz invariant intrinsic decoherence. New Journal of Physics, 2006, 8, 96-96.	1.2	34
30	Measurement-Based Teleportation along Quantum Spin Chains. Physical Review Letters, 2005, 95, 230501.	2.9	23
31	Ion Trap Simulations of Quantum Fields in an Expanding Universe. Physical Review Letters, 2005, 94, 220401.	2.9	63
32	Foundations of Quantum Technology. Journal of Computational and Theoretical Nanoscience, 2005, 2, 161-179.	0.4	3
33	Schrödinger cats and their power for quantum information processing. Journal of Optics B: Quantum and Semiclassical Optics, 2004, 6, S828-S833.	1.4	139
34	Mesoscopic One-Way Channels for Quantum State Transfer via the Quantum Hall Effect. Physical Review Letters, 2004, 93, 126804.	2.9	47
35	Teleportation in a non-inertial frame. Journal of Optics B: Quantum and Semiclassical Optics, 2004, 6, S834-S843.	1.4	92
36	Teleportation with a Uniformly Accelerated Partner. Physical Review Letters, 2003, 91, 180404.	2.9	261

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37	Experimental tests of quantum nonlinear dynamics in atom optics. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2003, 5, R83-R120.	1.4	33
38	Dynamical tunnelling of ultracold atoms. <i>Nature</i> , 2001, 412, 52-55.	13.7	316
39	Nonconventional computing paradigms in the new millennium: a roundtable. <i>Computing in Science and Engineering</i> , 2001, 3, 82-99.	1.2	8
40	Hamiltonian mappings and circle packing phase spaces. <i>Physica D: Nonlinear Phenomena</i> , 2001, 155, 34-50.	1.3	30
41	Non-Markovian homodyne-mediated feedback on a two-level atom: a quantum trajectory treatment. <i>Chemical Physics</i> , 2001, 268, 221-235.	0.9	14
42	A scheme for efficient quantum computation with linear optics. <i>Nature</i> , 2001, 409, 46-52.	13.7	4,737
43	A new approach to current and noise in double quantum dot systems. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2000, 6, 664-667.	1.3	1
44	Qutrit entanglement. <i>Optics Communications</i> , 2000, 179, 439-446.	1.0	79
45	Single-spin measurement using single-electron transistors to probe two-electron systems. <i>Physical Review B</i> , 2000, 61, 2961-2972.	1.1	103
46	Universal Teleportation with a Twist. <i>Physical Review Letters</i> , 2000, 84, 3486-3489.	2.9	126
47	Quantum chaos in atom optics. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 2000, 80, 2023-2056.	0.6	1
48	Quantum Measurement and Stochastic Processes in Mesoscopic Conductors. <i>Australian Journal of Physics</i> , 2000, 53, 477.	0.6	8
49	Absorptive Quantum Measurements via Coherently Coupled Quantum Dots. <i>Australian Journal of Physics</i> , 2000, 53, 463.	0.6	2
50	A NEW APPROACH TO SHOT NOISE IN RESONANT TUNNELLING CURRENT. <i>International Journal of Modern Physics B</i> , 1999, 13, 505-509.	1.0	1
51	Weak-force detection using a double Bose-Einstein condensate. <i>Physical Review A</i> , 1999, 59, 4630-4635.	1.0	14
52	Chaotic dynamics of cold atoms in far-off-resonant donut beams. <i>Physical Review E</i> , 1999, 59, 2842-2845.	0.8	6
53	Quantum open-systems approach to current noise in resonant tunneling junctions. <i>Physical Review B</i> , 1999, 59, 10748-10756.	1.1	56
54	Sensitivity to measurement errors in the quantum kicked top. <i>Physical Review A</i> , 1999, 59, 1781-1787.	1.0	4

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55	Macroscopically distinct quantum-superposition states as a bosonic code for amplitude damping. <i>Physical Review A</i> , 1999, 59, 2631-2634.	1.0	308
56	Decoherence and fidelity in ion traps with fluctuating trap parameters. <i>Physical Review A</i> , 1999, 59, 3766-3774.	1.0	62
57	Quantum teleportation with squeezed vacuum states. <i>Physical Review A</i> , 1999, 60, 937-942.	1.0	191
58	Quantum theory for current noise in resonant tunnelling devices. <i>Superlattices and Microstructures</i> , 1998, 23, 883-891.	1.4	4
59	Measurements on Trapped Laser-Cooled Ions Using Quantum Computations. <i>Fortschritte Der Physik</i> , 1998, 46, 707-712.	1.5	0
60	Homodyne measurements on a Bose-Einstein condensate. <i>Physical Review A</i> , 1998, 58, 2399-2406.	1.0	50
61	Classical and quantum noise in electronic systems. <i>Contemporary Physics</i> , 1998, 39, 67-79.	0.8	5
62	Quantum-state protection in cavities. <i>Physical Review A</i> , 1998, 57, 4930-4944.	1.0	66
63	Interference in hyperbolic space. <i>Physical Review A</i> , 1998, 57, 1529-1535.	1.0	3
64	Decoherence in ion traps due to laser intensity and phase fluctuations. <i>Physical Review A</i> , 1998, 57, 3748-3752.	1.0	96
65	Characterizing Greenberger-Horne-Zeilinger Correlations in Nondegenerate Parametric Oscillation via Phase Measurements. <i>Physical Review Letters</i> , 1998, 81, 4285-4288.	2.9	20
66	An Atom-optical Maxwell Demon. <i>Australian Journal of Physics</i> , 1998, 51, 1.	0.6	2
67	Controlling the Decoherence of a "Meter" via Stroboscopic Feedback. <i>Physical Review Letters</i> , 1997, 79, 2442-2445.	2.9	88
68	Optimal quantum trajectories for discrete measurements. <i>Journal of Modern Optics</i> , 1997, 44, 2469-2484.	0.6	5
69	Quantum chaos in the atomic gravitational cavity. <i>Physical Review E</i> , 1997, 56, 351-354.	0.8	10
70	Correcting the effects of spontaneous emission on cold-trapped ions. <i>Physical Review A</i> , 1997, 56, 640-644.	1.0	3
71	Conditional variance reduction by measurements on correlated field modes. <i>Physical Review A</i> , 1997, 55, 1430-1436.	1.0	8
72	Quantum dynamics of an atomic Bose-Einstein condensate in a double-well potential. <i>Physical Review A</i> , 1997, 55, 4318-4324.	1.0	984

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73	Reconstructing the vibrational state of a trapped ion. <i>Physical Review A</i> , 1996, 54, R25-R28.	1.0	60
74	Generalized Uncertainty Relations: Theory, Examples, and Lorentz Invariance. <i>Annals of Physics</i> , 1996, 247, 135-173.	1.0	566
75	Effect of noise and modulation on the reflection of atoms from an evanescent wave. <i>Physical Review A</i> , 1996, 54, 1510-1515.	1.0	2
76	Milburn replies:. <i>Physical Review Letters</i> , 1996, 77, 2337-2337.	2.9	0
77	Measurements on trapped laser-cooled ions using quantum computations. <i>Physical Review A</i> , 1996, 54, 5141-5146.	1.0	20
78	Nonlinear Dynamics in Atom Optics. <i>Australian Journal of Physics</i> , 1996, 49, 777.	0.6	8
79	Fractional quantum revivals in the atomic gravitational cavity. <i>Physical Review A</i> , 1995, 51, 2328-2333.	1.0	18
80	Optimal Quantum Measurements for Phase Estimation. <i>Physical Review Letters</i> , 1995, 75, 2944-2947.	2.9	198
81	Measuring the vibrational energy of a trapped ion. <i>Physical Review A</i> , 1995, 52, 4755-4762.	1.0	27
82	Effect of dissipation and measurement on a tunneling system. <i>Physical Review A</i> , 1995, 52, 3323-3332.	1.0	1
83	Creating Metastable Schrödinger Cat States. <i>Physical Review Letters</i> , 1995, 75, 418-421.	2.9	21
84	Dynamics of statistical distance: Quantum limits for two-level clocks. <i>Physical Review A</i> , 1995, 51, 1820-1826.	1.0	28
85	Optimal Quantum Trajectories for Continuous Measurement. <i>Physical Review Letters</i> , 1995, 74, 4827-4830.	2.9	21
86	Creating number states in the micromaser using feedback. <i>Physical Review A</i> , 1995, 51, 736-751.	1.0	17
87	Noise reduction in the nondegenerate parametric oscillator with direct detection feedback. <i>Physical Review A</i> , 1994, 50, 793-800.	1.0	11
88	All-optical versus electro-optical quantum-limited feedback. <i>Physical Review A</i> , 1994, 49, 4110-4125.	1.0	167
89	Quantum scattering of a two-level atom in the limit of large detuning. <i>Physical Review A</i> , 1994, 49, 4180-4188.	1.0	10
90	Hyperbolic phase and squeeze-parameter estimation. <i>Physical Review A</i> , 1994, 50, 801-804.	1.0	31

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91	Wiseman and Milburn reply. Physical Review Letters, 1994, 72, 4054-4054.	2.9	0
92	Squeezing via feedback. Physical Review A, 1994, 49, 1350-1366.	1.0	148
93	Interpretation of quantum jump and diffusion processes illustrated on the Bloch sphere. Physical Review A, 1993, 47, 1652-1666.	1.0	294
94	Quantum theory of optical feedback via homodyne detection. Physical Review Letters, 1993, 70, 548-551.	2.9	507
95	Continuous position measurements and the quantum Zeno effect. Physical Review A, 1993, 48, 132-142.	1.0	69
96	Quantum theory of field-quadrature measurements. Physical Review A, 1993, 47, 642-662.	1.0	396
97	Reply to "Comment on 'Intrinsic decoherence in quantum mechanics'" Physical Review A, 1993, 47, 2415-2416.	1.0	13
98	Quantum features in the scattering of atoms from an optical standing wave. Physical Review A, 1993, 47, R2484-R2487.	1.0	14
99	Quantum-noise reduction in a driven cavity with feedback. Physical Review A, 1993, 47, 634-638.	1.0	8
100	Nonlinear quantum dynamics at a classical second-order resonance. Physical Review E, 1993, 48, 969-978.	0.8	20
101	Interference in a spherical phase space and asymptotic behavior of the rotation matrices. Physical Review A, 1993, 48, 1854-1860.	1.0	11
102	Eavesdropping using quantum-nondemolition measurements. Physical Review A, 1993, 47, 639-641.	1.0	7
103	Quantum tunneling in a Kerr medium with parametric pumping. Physical Review A, 1993, 48, 2494-2496.	1.0	46
104	Chaos and coherence in an optical system subject to photon nondemolition measurement. Physical Review A, 1992, 46, 762-770.	1.0	13
105	Reduction in laser-intensity fluctuations by a feedback-controlled output mirror. Physical Review A, 1992, 46, 2853-2858.	1.0	16
106	Rydberg-atom phase-sensitive detection and the quantum Zeno effect. Physical Review A, 1992, 46, 1578-1585.	1.0	18
107	Quantum Zeno effect induced by quantum-nondemolition measurement of photon number. Physical Review A, 1992, 45, 5228-5236.	1.0	14
108	Quantum limits to all-optical phase shifts in a Kerr nonlinear medium. Physical Review A, 1992, 45, 1919-1923.	1.0	59

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109	Quantum Noise Reduction by Photodetection with Feedback. Journal of Modern Optics, 1991, 38, 1973-1980.	0.6	3
110	Intrinsic decoherence in quantum mechanics. Physical Review A, 1991, 44, 5401-5406.	1.0	426
111	Quantum nondemolition measurements using a fully quantized parametric interaction. Physical Review A, 1991, 43, 6177-6186.	1.0	4
112	Noise reduction in a laser by nonlinear damping. Physical Review A, 1991, 44, 7815-7819.	1.0	12
113	Photon statistics of two-mode squeezed states and interference in four-dimensional phase space. Physical Review A, 1991, 43, 3854-3861.	1.0	95
114	Quantum coherence and classical chaos in a pulsed parametric oscillator with a Kerr nonlinearity. Physical Review A, 1991, 44, 4704-4711.	1.0	62
115	Interpretation for a positive representation. Physical Review A, 1991, 43, 1153-1159.	1.0	73
116	Correlated photons in parametric frequency conversion with initial two-mode squeezed states. Optics Communications, 1990, 76, 253-255.	1.0	4
117	Coherence and chaos in a quantum optical system. Physical Review A, 1990, 41, 6567-6570.	1.0	25
118	Quantum nondemolition measurement of quantum beats and the enforcement of complementarity. Physical Review A, 1989, 40, 7087-7092.	1.0	1
119	Destruction of quantum coherence in a nonlinear oscillator via attenuation and amplification. Physical Review A, 1989, 39, 4628-4640.	1.0	82
120	Complementarity in a quantum nondemolition measurement. Physical Review A, 1989, 39, 694-702.	1.0	71
121	Comment on "Quantum chaotic system in the generalized Husimi representation". Physical Review A, 1989, 39, 2749-2750.	1.0	8
122	Photon-number-state preparation in nondegenerate parametric amplification. Physical Review A, 1989, 39, 2493-2501.	1.0	46
123	Squeezed-state Superpositions in a Damped Nonlinear Oscillator. Journal of Modern Optics, 1989, 36, 1607-1614.	0.6	24
124	Quantum optical Fredkin gate. Physical Review Letters, 1989, 62, 2124-2127.	2.9	356
125	Effect of dissipation on interference in phase space. Physical Review A, 1988, 38, 1087-1090.	1.0	61
126	Quantum nondemolition measurements in optical cavities. Physical Review A, 1988, 37, 2970-2978.	1.0	59

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127	Quantum measurement theory of optical heterodyne detection. <i>Physical Review A</i> , 1987, 36, 5271-5279.	1.0	30
128	Linear amplifiers with phase-sensitive noise. <i>Physical Review A</i> , 1987, 35, 4443-4445.	1.0	42
129	Kicked quantized cavity mode: An open-systems-theory approach. <i>Physical Review A</i> , 1987, 36, 744-749.	1.0	28
130	Quantum-mechanical model for continuous position measurements. <i>Physical Review A</i> , 1987, 36, 5543-5555.	1.0	286
131	Atomic-level shifts in a squeezed vacuum. <i>Physical Review A</i> , 1986, 34, 4882-4885.	1.0	52
132	Dissipative Quantum and Classical Liouville Mechanics of the Anharmonic Oscillator. <i>Physical Review Letters</i> , 1986, 56, 2237-2240.	2.9	286
133	Quantum and classical Liouville dynamics of the anharmonic oscillator. <i>Physical Review A</i> , 1986, 33, 674-685.	1.0	310
134	Generation of squeezed states of light with a fiber-optic ring interferometer. <i>Physical Review A</i> , 1986, 33, 4008-4025.	1.0	54
135	Effect of dissipation on quantum coherence. <i>Physical Review A</i> , 1985, 31, 2403-2408.	1.0	380
136	Analysis of a quantum measurement. <i>Physical Review D</i> , 1985, 32, 3208-3215.	1.6	86
137	State reduction in quantum-counting quantum nondemolition measurements. <i>Physical Review A</i> , 1984, 30, 56-60.	1.0	67
138	Quantum nondemolition measurements on coupled harmonic oscillators. <i>Physical Review A</i> , 1983, 27, 2804-2816.	1.0	22
139	Quantum nondemolition measurements via quantum counting. <i>Physical Review A</i> , 1983, 28, 2646-2648.	1.0	31
140	Quantum solutions of the damped harmonic oscillator. <i>American Journal of Physics</i> , 1983, 51, 1134-1136.	0.3	31
141	Quantum nondemolition measurements via quadratic coupling. <i>Physical Review A</i> , 1983, 28, 2065-2070.	1.0	129
142	Squeezed states and intensity fluctuations in degenerate parametric oscillation. <i>Physical Review A</i> , 1983, 27, 392-394.	1.0	80